



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,174	04/30/2001	Bernd Froehlich	0179-0167P	3536

2292 7590 05/27/2003

BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

DHARIA, PRABODH M

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED: 05/27/2003

1 (

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/763,174

Applicant(s)

FROELICH ET AL.

Examiner

Prabodh M Dharja

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

Art Unit: 2673

1. Status: Receipt is acknowledged of papers submitted April 21, 2003 under Amendments and new claims which have been placed of record in the file. Claims 1-14 are pending in this action.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,4,5-7,11-14, rejected under 35 U.S.C. 103(a) as being unpatentable over Yasutake (5,729,249) view of Gilligan et al. (5,313,229).

Regarding Claim 01, Yasutake teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. 6, lines 45,46), three control signal generating devices for generating first control signals to the display device (Col. 6, Lines 43-48), three mutually orthogonal actuating elements (figure 7, Col. 9, Lines 11-15), each being supported at or in the housing for linear displacement along one of three orthogonal spatial axes (x, y, z) (figure 7, Col. 9, Lines 9-15) and projecting outward beyond the housing within at least one of two opposite portions of the housing, respectively, each actuating element respectively cooperating with a different one of the control signal generating devices (figure 7, Col. 9, Lines 11-27), and wherein, in dependence on the displacement position of the actuating elements, the control signal generating devices generate the first control signals for displacement of the object on the display

Art Unit: 2673

device along three directions corresponding to the spatial axes of the housing on the display device (Col. 4, Lines 1-3, Col. 9, Lines 11-27).

However, Yasutake fails to teach a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing.

However, Gilligan et al. teaches a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing (Col. 1, Lines 6-10, Col. 11, Line 64 to Col. 12, Line 2, Col. 12, Lines 24-30).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Gilligan et al. teaching in teaching of Yasutake for input device be able to generate positional control signal, improving and speeding up its operation.

Regarding Claim 04, Yasutake teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. 6, lines 45,46), three control signal generating devices for generating first control signals to the display device (Col. 6, Lines 43-48), three pairs of actuating elements responsive to actuating conditions, both actuating elements in each pair being arranged at different, in particular opposite (figure 1, Col. 5, Lines 36-47) portions of the housing lying on a respective one of three orthogonal spatial axes extending through the housing (figure

Art Unit: 2673

1, Col. 5, lines 53-67), each pair of actuating elements respectively cooperating with a different one of the control signal generating devices (Col. 5, Lines 56-67), and wherein, in dependence on the actuating conditions of the actuating elements, the control signal generating devices generate the first control signals for displacement of the object on the display device along three directions corresponding to the spatial axes of the housing on the display device (Col. 5, Lines 53-58),

However, Yasutake fails to teach a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing.

However, Gilligan et al. teaches a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing (Col. 1, Lines 6-10, Col. 11, Line 64 to Col. 12, Line 2, Col. 12, Lines 24-30).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Gilligan et al. teaching in teaching of Yasutake for input device be able to generate positional control signal, improving and speeding up its operation.

Regarding Claim 05, Yasutake teaches the actuating elements are supported at or in the housing for rotation about their axes (x, y, z) extending in the respective direction of displacement and wherein the control signal generating devices generate second control signals

Application/Control Number: 09/763,174

Art Unit: 2673

to the display device in dependence on the rotational positions of the actuating elements (Col. 9, Lines 9-42).

Regarding Claim 06, Yasutake teaches a rotary actuating element is provided per actuating element, which is rotatable around the axis of the associated actuating element extending in the direction of displacement (x; y; z) and wherein the control signal generating devices or additional control signal generating devices generate second control signals to the display device in dependence on the rotational position of the rotary actuating elements (Col. 9, Lines 9-42, Col. 1, Lines 14-22).

Regarding Claim 07, Yasutake teaches the actuating elements penetrate the rotary actuating elements (Col. 9, Lines 9-42).

Regarding Claim 11, Yasutake teaches the housing has the shape of a parallelepiped (Webster defines as six parallelogram planes connected in the space-cube or polyhedron), in particular a cube, and the actuating elements protrude from all side walls of the housing or are arranged on all side walls of the housing (Col. 5, Line 53 to Col. 6, Line 6).

Regarding Claim 12, Yasutake teaches the housing is spherical in shape and the actuating elements are protrude from or are arranged in substantially diametrically opposite regions (Col. 2, Lines 27-30, figure 18, Lines 42-49).

Art Unit: 2673

Regarding Claim 13, Yasutake teaches the housing substantially corresponds to the outer contour of an object to be displayed on the display device and the actuating elements are arranged corresponding to the axes along which the object may be controlled in its representation (figure 30, 33a1, 33a2, Col. 14, Lines 34 to Col. 15, Line 6).

Regarding Claim 14, Yasutake teaches a display system for representing sectional views of an object that are adapted to be displaced along orthogonal axes (figure 28b, 28d, 28f, Col. 13, Line 65 to Col. 14, Line 18) comprising a display device and an input device for generating control signals for displacing and/or orienting and/or positioning the object to be represented and/or displacing the sectional views along the axes (x, y, z), the input device being configured according to one of the previous claims (33a2, 33b2, 33c2, Col. 13, Line 65 to Col. 15, Line 43).

Gilligan et al. teaches a display device and a position detection sensor arrangement provided in or at the housing, the position detection arrangement sensing the orientation and/or the position of the housing and generating a corresponding control signal to the display device for orienting the object on the display device according to the orientation and position of the housing (Col. 1, Lines 6-10, Col. 11, Line 64 to Col. 12, Line 2, Col. 12, Lines 24-30).

4. Claims 2,3,8-10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasutake (5,729,249) in view of Gilligan et al. (5,313,229) as applied to claims 1,4,5-7,11-14, as above and further in view of Levin et al. (6,154,201).

Art Unit: 2673

Regarding Claim 02, Yasutake modified by Gilligan et al. teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. 6, lines 45,46).

However, Yasutake modified by Gilligan et al. fails to teach the actuating elements are supported in or at the housing around a rest position, in particular centered about a rest position, and automatically move back into the rest position upon displacement from the same.

However, Levin et al. teaches the actuating elements are supported in or at the housing around a rest position, in particular centered about a rest position, and automatically move back into the rest position upon displacement from the same (Col. 1, Line 60 to Col. 2, Line 15, Col. 2, Lines 38-40, Col. 5, Lines 47-65).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Levin et al. in Yasutake modified by Gilligan et al. teaching for having a user friendly input device with greater control of functionality.

Regarding Claim 03, Levin et al. teaches only upon a displacement from the rest position, will the control signal generating devices generate control signals in dependence on the direction and/or degree of displacement (Col. 1, Line 60 to Col. 2, Line 50).

Regarding Claim 08, Yasutake modified by Gilligan et al. teaches an input device (Col. 1, Line 14) for control signals for controlling the movement of an object represented on a display device (Col. 6, Lines 27-33), comprising a housing (Col. 6, lines 45,46).



Art Unit: 2673

However, Yasutake modified by Gilligan et al. fails to teach at or in the housing, switches or key switches or other actuating elements are arranged for providing further control signals to the display device(10).

However, Levin et al. teaches at or in the housing (Col. 4, Lines 54,55), switches or key switches or other actuating elements are arranged for providing further control signals to the display device (Col. 4, Lines 48-50).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Levin et al. in Yasutake modified by Gilligan et al. teaching for having a user friendly input device with greater control of functionality.

Regarding Claim 09, Levin et al. teaches actuating element and - if provided - per rotary actuating element, one means for preventing further displacement or turning, the means being controllable by the display device in dependence on the position an object represented on the display device is in within an environment also represented on the display device (Col. 3, Lines 7-36, Col. 5, Lines 47-65).

Regarding Claim 10, Levin et al. teaches the preventing means comprises a mechanical braking/blocking device for blocking the respective actuating element and/or the rotary element, or a drive means for moving or turning the actuating element and/or the rotary actuating element (Col. 1, Line 60 to Col. 2, Line 15, Col. 2, Lines 38-40, Col. 5, Lines 47-65).

*Response to Arguments*

5. Applicant's arguments filed 04-21-2003 have been fully considered but they are not persuasive.

6. Applicant argument about the cited references fails to teach orientation/position detecting sensor of the mouse is moot because of new ground of rejection.

Applicant argues the priority date of the application would overcome the filing date of the Levin et al. (6,154,201).

Examiner disagrees, as the parent application of Levin et al. was originally filed on March 26, 1998 and divisional was filed on Nov. 26, 1996 which has basic; abstract, brief description and specifications are same. Since the rejection of the claims are based on the abstract, brief description and specifications, the reference date is March 26, 1998/Nov. 26, 1996, and priority date is September 8, 1998 (09-08-1998), so it does not overcome cited reference.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is informed that all of the other additional cited references anticipate the claimed material and render the claims obvious.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Martinelli (5.760,764) Computer display cursor controller with serial interface.

Art Unit: 2673

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M Dharia whose telephone number is 703-605-1231.

The examiner can normally be reached on M-F 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-3054938. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9341 for regular communications and 703-872-9341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Any response to this action should be mailed to:

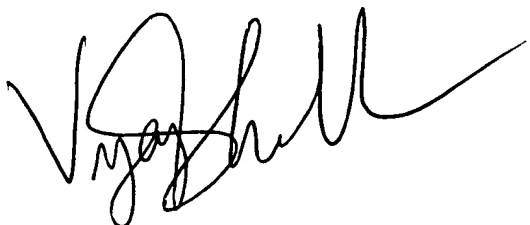
Commissioner of Patents and Trademarks

Washington, D.C. 20231

PD

AU2673

May 22, 2003



VIJAY SHANKAR  
PRIMARY EXAMINER